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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,074	09/27/2000	Christian Lauble	10537/68	1448

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/485,074	Applicant(s) LAUBLE ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of the vibration damper being constructed for "limiting the formation of vibrations" as first claimed in claim 9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Applicant describes in the Remarks of paper no. 22 the structure for such a vibration limiting function as having no connection between the vibration damper and the mass body. However, as shown in figure 1 of the instant application vibration damper 1 is connected to mass body 51,52,53 via elements 31,32,10,15. Clarification is required.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re: claims 9, 11, and 17-20. In line 1 of the claims the phrase "for limiting the formation of vibrations" is recited. Applicant explains in the last two lines on pg. 5 of the remarks of paper no. 22 that "The vibration damper of the present invention relates to an element that has no connection to the mass body". However, it is noted that in figure 1 of the present invention the vibration damper relates to an element 1 that is connected to the mass body 51,52,53 via elements 31,32 and elements 10,15. Accordingly, the present invention fails to include the necessary structure, as defined by Applicant, to achieve the function of limiting the formation of vibrations. See Drawing Objection.

Re: claims 10 and 12-16. Claims 10 and 12-16 are indefinite due to their dependency from claims 9 and 11, respectively.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-16 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 9 and 11. The phrase "a space" in line 11 is indefinite. It is unclear to the Examiner whether the space is intended to be the same or different from the space claimed in line 2 from the bottom of the claim.

Re: claims 9 and 11. The phrase "an adjacent rubber spring element" in line 12 is indefinite. It is unclear to the Examiner whether the "an adjacent rubber spring element" is intended to be the same or different from one of the "plurality of rubber spring elements" claimed earlier in claim 9. Examiner recommends such language as

--between each stop element and each rubber spring element-- if Applicant intends to refer back to each of the rubber spring elements previously claimed.

Re: claims 10 and 12-16. Claims 10 and 12-16 are indefinite due to their dependency from claims 9 and 11, respectively.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent EP-0748949 to Hofmann et al. (using US Patent 5704597 to Hofmann et al. as an English equivalent).

Re: claim 9. Hofmann et al. show in figure 1 a vibration damper capable of being used for a tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve 11 the sleeve defining a radial and circumferential direction, a mass body 12 mounted concentrically in the sleeve, a plurality of spring elements 17a, 17b for mounting the mass body to the sleeve, and a plurality of flexible stop elements top and bottom elements 21 disposed circumferentially between the spring elements and disposed between the mass body and the sleeve to define a discrete space 13 to limit a vibration travel of the mass body at least in the radial direction, wherein the stop elements extend over a larger circumferential angle than the

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spring elements and occupy a large portion of a space between the mass body, the spring elements and the sleeve as shown in figure 1, but does not specifically disclose that the spring elements are rubber. Hofmann et al. teach in figures 2 and 3 the spring elements and the stop elements being shown with the same cross-hatching and discloses in line 6 of the abstract the stop elements being composed of rubber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the spring elements of Hofmann et al. to have been made of rubber, in view of the teachings of Hofmann et al., in order to provide good shock absorbing properties.

Re: claim 15. Hofmann et al. show in figure 3 the limitation wherein the sleeve further defines an axial direction and wherein the mass body is mounted axially between at least two of the plurality of spring elements and the sleeve fits axially around the mass body as shown in figure 3.

Re: claim 16. Hofmann et al. show in figure 1 the limitation wherein the sleeve includes a tubular segment having two sides – one side shown above the bolts 25a,b and the other side shown below the bolts and two end faces shown in the areas of the lines associated with element numbers 25a and 25b, planar, disk-shaped regions being included at both end faces as shown, the plurality of spring elements being attached to the disk-shaped regions.

8. Claims 9-12 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori.

Re: claims 9-12 and 17-20. GB-1341087 shows in figure 1 a vibration damper capable of being used for a tubular propeller shaft in the drive train of a motor vehicle, the vibration damper comprising: a sleeve 10 the sleeve defining a radial and circumferential direction, a mass body 14,19 mounted concentrically in the sleeve, a plurality of elastic spring elements 16 for mounting the mass body to the sleeve, and a plurality of flexible stop elements 17 disposed circumferentially between the spring elements and disposed between the mass body and the sleeve to define a discrete space 20 to limit a vibration travel of the mass body at least in the radial direction and occupying a large portion of space between the mass body, the spring elements and the sleeve, but does not specifically disclose the limitation of the elastic spring elements being composed of rubber and does not disclose the limitation wherein the stop elements extend over a larger circumferential angle than the spring elements.

Hori teaches in col. 1 lines 21-23 the use of the elastic members of a vibration damper being composed of rubber. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the elastic spring elements of the vibration damper of GB-1341087 to have been composed of rubber or any suitable elastic material, as taught by Hori, in order to provide good shock absorbing properties.

Hori teaches in figure 1 the limitation wherein the stop elements 32,34 extend over a larger circumferential angle than the spring elements 16 shown in the area of element numbers 16, 24, 25, and 27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the stop elements and

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spring elements of GB-1341087 to have included stop elements extending over a larger circumferential angle than the spring elements, as taught by Hori, in order to provide more radial flexibility in the damper since the stops are spaced a distance away from the sleeve.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori as applied to claim 9 above, and further in view of Shimazaki et al. Shimazaki et al. teach the use of a propeller shaft 21,211 mounted concentrically with a sleeve 132,134 wherein the sleeve includes a first 132 and second 134 tube segment joined together, the first tube segment having a greater outside diameter than an outside diameter of the second tube segment and corresponding approximately to an inside diameter of the propeller shaft 21,211, the second tube segment 134 carrying on an outer contour of the mass body 131, a least a portion of the plurality of spring elements 133 connecting the second tube segment 134 to the mass body 131, the mass body being annular at least in an area of connection with the second tube segment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vibration damper of GB-1341087 to include a propeller shaft concentric with the sleeve, as taught by Shimazaki et al., in order to provide a means of connecting the sleeve to a drive train of a motor vehicle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the sleeve of GB-1341087 to include two tube segments of different diameters joined together and arranged, as taught by Shimazaki

et al., in order to provide reinforced structural integrity between the propeller shaft and the mass body during the course of the vibration travel.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over GB-1341087 in view of Hori as applied to claim 11, and further in view of FR-2720132.

Re: claim 13. FR-2720132 teaches in figure 6 the limitation wherein a sleeve 1 includes an undulating longitudinal profile having troughs (shown on either side of elements 11), spring elements 3 being arranged at the troughs and at least a portion of the troughs serving as at least a portion of the stop elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the damper of GB-1341087 to have included a sleeve including an undulating longitudinal profile, as taught by FR-2720132, in order to provide and stop element means or peaks 11 adjacent to the troughs integrally formed within the sleeve which provide stopping functions in addition to the stop elements 17 of GB-1341087.

Response to Arguments

11. Applicant's arguments filed 11/13/02 have been fully considered but they are not persuasive. With respect to the arguments regarding the Hofmann et al. reference, Applicant argues that Hofmann fails to show a contact surface of each stop element that extends over a larger circumferential angle than the spring elements and than a space between each stop element and an adjacent rubber spring element. Examiner notes that the radially outermost surface of top and bottom elements 21 is a contact surface as it contacts the inner surface of element 11 under great forces as disclosed in col. 4 lines 63-64. It is noted from figure 1 that the contact surface extends over a larger

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circumferential angle than the spring elements and the contact surface extends over a larger circumferential angle than the radially innermost space between the stop element and the adjacent spring element, as broadly claimed. Applicant also argues that Hofmann fails to show the vibration damper being used for limiting the formation of vibrations and that the damper of the present invention limits the formation of vibrations because the instant invention damper "relates to an element that has no connection to the mass body". Examiner notes, however, that in figure 1 of the instant application it is shown that the vibration damper 1 is connected to the mass body 51,52,53 via elements 10,15 and 31,32. Accordingly, Examiner maintains that Hofmann shows the invention to the same extent as Applicant. With respect to the arguments regarding the British reference, Applicant argues that the British reference fails to show a plurality of flexible stop elements disposed between the mass body and sleeve to a discrete space.

Examiner reiterates that the British reference shows flexible stop elements 17 disposed between the mass body 14,19 and sleeve 10 to define a discrete space shown in the area of element number 20. Applicant argues that the pockets of Hori are not discrete, however, the argument is irrelevant since Hori is used solely for the teaching of the use of rubber and the teaching of the stop elements 32,34 extending over a larger circumferential angle than the spring elements 16 shown in the area of element numbers 16, 24, 25, and 27. Applicant argues that the combination of the British reference with Hori fails to show that at least one of a mass body and a propeller shaft at least partially form a plurality of stop elements. Examiner notes that as shown in the British reference the outermost surfaces of mass body portion 19 in the areas adjacent

to space 20 form stop elements since under great force the outermost surfaces of mass body portion 19 would abut against the bottom surfaces of element 17 which is connected to sleeve 10 just as the outermost surfaces of mass body portion 53 of the instant in the areas adjacent to the space shown in between 16 and 53 form stop elements since under great force the outermost surfaces of mass body portion 53 would abut against the bottom surfaces of sleeve 16. The claims do not preclude the use of a variety of types of stop elements.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 1/14/03
mmb
January 14, 2003

M. C. Graham 1/14/2003
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310